

【書類名】 図面

【図1】

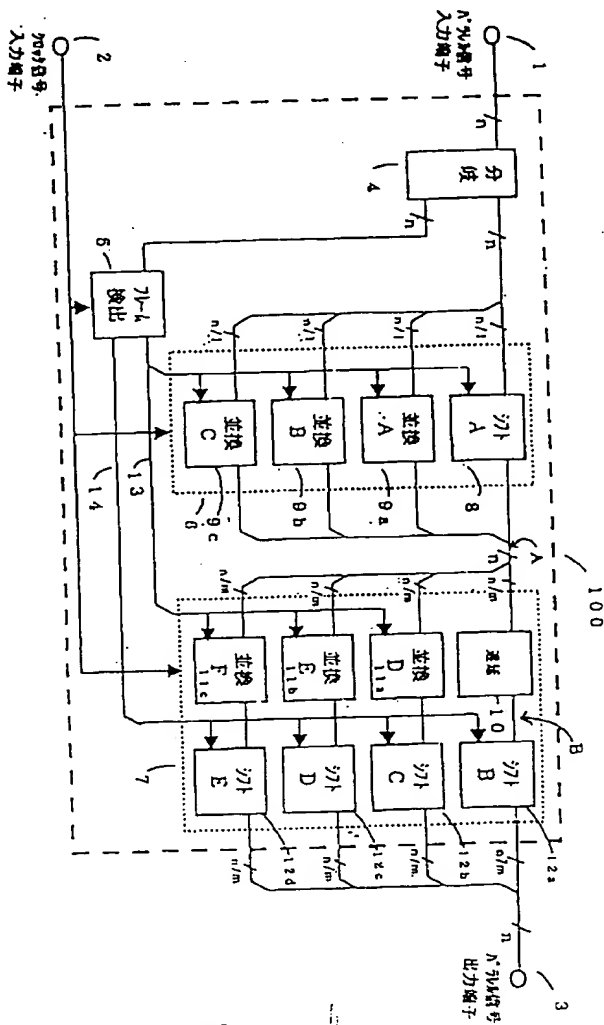


Fig. 1

[Fig. 1]

- 1: Parallel Signal Input Terminal
- 2: Clock Signal Input Terminal
- 3: Parallel Signal Output Terminal
- 4: Branch
- 5: Frame Detection
- 8: Shift A
- 9a: Sort A
- 9b: Sort B
- 9c: Sort C
- 10: Delay
- 11a: Sort D
- 11b: Sort E
- 11c: Sort F
- 12a: Shift B
- 12b: Shift C
- 12c: Shift D
- 12d: Shift E

【図2】

Fig. 2

シフト回路A-Eの真理値表(並び換え回路の出力が4ビットの時)

入力						出力			
D0	D1	D2	D3	SZL	CLK	Q0	Q1	Q2	Q3
A	B	C	D	0	↑	A	B	C	D
A	B	C	D	1	↑	B	C	D	A(+1)
A	B	C	D	2	↑	C	D	A(+1)	B(+1)
A	B	C	D	3	↑	D	A(+1)	B(+1)	C(+1)

[Fig. 2]

A1: Truth Table of Shift Circuits A to E (Where Input of Sort Circuit and Shift Circuit is 4 Bits)

A2: Input

A3: Output

【図3】 Fig. 3

並び換え回路A-Cの真値表(並び換え回路の入力が4ビットの時)

入力					出力			
D0	D1	D2	D3	SEL	Q0	Q1	Q2	Q3
A	B	C	D	0	A	B	C	D
A	B	C	D	1	B	C	D	A
A	B	C	D	2	C	D	A	B
A	B	C	D	3	D	A	B	C

【図4】 Fig. 4

並び換え回路D-Fの1ビットの真値表(1ビットの回路の入力が4ビットの時)

入力					出力			
D0	D1	D2	D3	CLK	Q0	Q1	Q2	Q3
A	B	C	D	↑	B	C	D	A

【図5】

Fig. 5A

SEL	Q0	Q1	Q2	Q3
SEL0	X	1	1	1
SEL1	X	1	1	1
SEL2	X	1	1	1
SEL3	X	1	1	1
SEL4	X	1	1	1
SEL5	X	1	1	1
SEL6	X	1	1	1
SEL7	X	1	1	1
SEL8	X	1	1	1
SEL9	X	1	1	1
SEL10	X	1	1	1
SEL11	X	1	1	1
SEL12	X	1	1	1
SEL13	X	1	1	1
SEL14	X	1	1	1
SEL15	X	1	1	1

Fig. 5B

SEL	Q0	Q1	Q2	Q3
SEL0	X	1	1	1
SEL1	X	1	1	1
SEL2	X	1	1	1
SEL3	X	1	1	1
SEL4	X	1	1	1
SEL5	X	1	1	1
SEL6	X	1	1	1
SEL7	X	1	1	1
SEL8	X	1	1	1
SEL9	X	1	1	1
SEL10	X	1	1	1
SEL11	X	1	1	1
SEL12	X	1	1	1
SEL13	X	1	1	1
SEL14	X	1	1	1
SEL15	X	1	1	1

[Fig. 5A]

A1: Data Input A

[Fig. 5B]

A2: State Data at Point A

A3: Shift A Output

A4: Sort A Output

A5: Low Order Bit of Frame Position Signal

[Fig. 3]

A1: Truth Table of Sort Circuits A to C (Where Input of Sort Circuit is 4 Bits)

A2: Input

A3: Output

[Fig. 4]

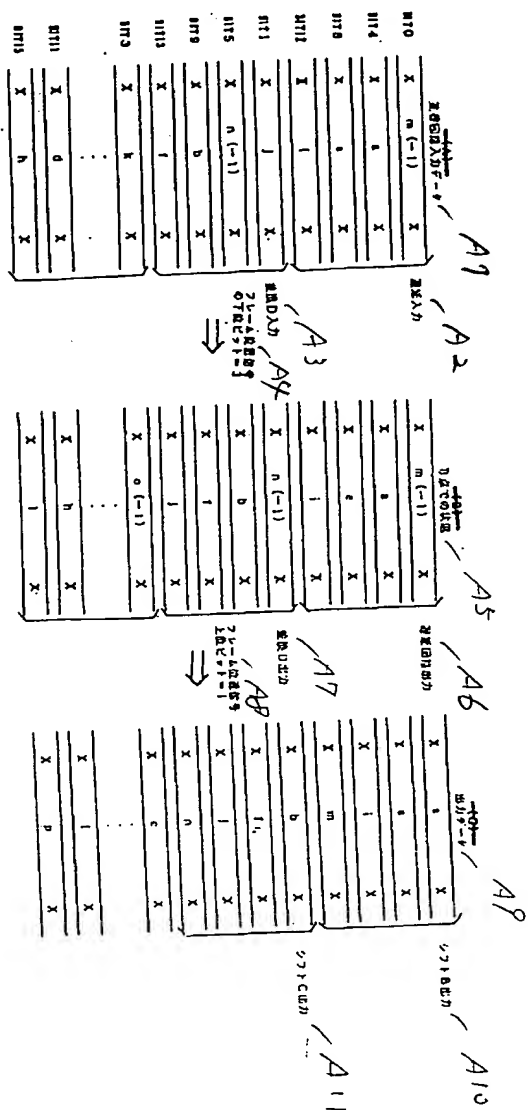
A1: Truth Table of Sort Circuits D to F in Enable (Where Input of 1 Bit Shift Circuit is 4 Bits)

A2: Input

A3: Output

Proof - 1999/11/29

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[Fig. 6A]

- A1: Input Data of Sort Circuit
A2: Delay Input
A3: Sort D Input
A4: Low Order Bit of Frame Position Signal

(Fig. 6B)

- A5: State at Point B
A6: Delay Circuit Output
A7: Sort D Output
A8: High Order Bit of Frame Position Signal

[Fig. 6C]

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A9: Output Data
A10: Shift B Output
A11: Shift C Output
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【図7】

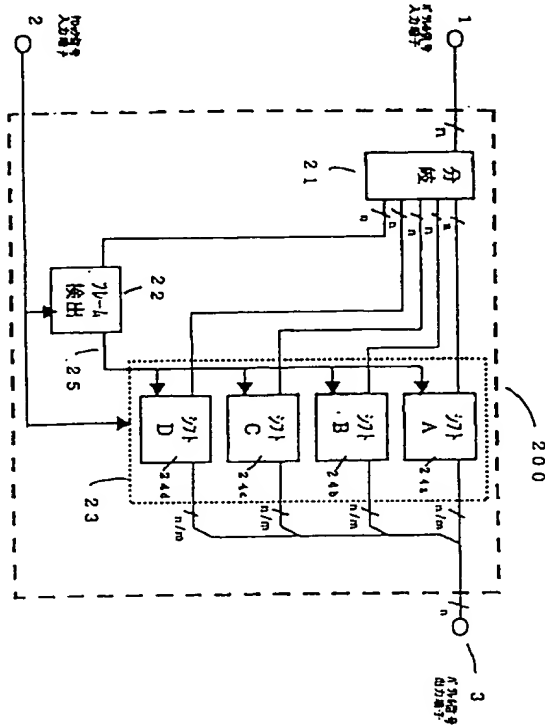


Fig. 7

[Fig. 8]

A1: Truth Table of Shift Circuit A (Where Data Input is 16 Bits, and There are Four Shift Circuits)

A2: Input

A3: Output

[Fig. 9]

A1: Truth Table of Shift Circuit B (Where Data Input is 16 Bits, and There are Four Shift Circuits)

A2: Input

A3: Output

【図8】

Fig. 8

A1

シフト回路Aの真理値表(データ入力が16ビット、シフト回路が4個構成の時)

| 入力 |    |    |     |     |     | 出力  |     |       |       |       |
|----|----|----|-----|-----|-----|-----|-----|-------|-------|-------|
| D0 | D1 | D2 | ... | D15 | SEL | CLK | Q0  | Q1    | Q2    | Q3    |
| A  | B  | C  | ... | P   | 0   | ↑   | A   | B     | C     | D     |
| A  | B  | C  | ... | P   | 1   | ↑   | B   | C     | D     | E     |
| A  | B  | C  | ... | P   | 2   | ↑   | C   | D     | E     | F     |
| A  | B  | C  | ... | P   | ... | ↑   | ... | ...   | ...   | ...   |
| A  | B  | C  | ... | P   | 15  | ↑   | P   | A(+1) | B(+1) | C(+1) |

【図9】

Fig. 9

A1

シフト回路Bの真理値表(データ入力が16ビット、シフト回路が4個構成の時)

| 入力 |    |    |     |     |     | 出力  |       |       |       |       |
|----|----|----|-----|-----|-----|-----|-------|-------|-------|-------|
| D0 | D1 | D2 | ... | D15 | SEL | CLK | Q0    | Q1    | Q2    | Q3    |
| A  | B  | C  | ... | P   | 0   | ↑   | E     | F     | G     | H     |
| A  | B  | C  | ... | P   | 1   | ↑   | F     | G     | H     | I     |
| A  | B  | C  | ... | P   | 2   | ↑   | G     | H     | I     | J     |
| A  | B  | C  | ... | P   | ... | ↑   | ...   | ...   | ...   | ...   |
| A  | B  | C  | ... | P   | 15  | ↑   | D(+1) | E(+1) | F(+1) | G(+1) |

[Fig. 7]

1: Parallel Signal Input Terminal

2: Clock Signal Input Terminal

21: Branch

22: Frame Detection

24a: Shift A

24b: Shift B

24c: Shift C

24d: Shift D

3: Parallel Signal Output Terminal

【図10】

A1

|       |   |        |   |
|-------|---|--------|---|
| BIT0  | X | 1 (-1) | X |
| BIT1  | X | 0 (-1) | X |
| BIT2  | X | 1 (-1) | X |
| BIT3  | X | 0 (-1) | X |
| BIT4  | X | 1 (-1) | X |
| BIT5  | X | 0 (-1) | X |
| BIT6  | X | 1 (-1) | X |
| BIT7  | X | 0 (-1) | X |
| BIT8  | X | 1 (-1) | X |
| BIT9  | X | 0 (-1) | X |
| BIT10 | X | 1 (-1) | X |
| BIT11 | X | 0 (-1) | X |
| BIT12 | X | 1 (-1) | X |

Fig. 10A

⇒  
A5

A2

|       |   |   |   |
|-------|---|---|---|
| BIT0  | X | 1 | X |
| BIT1  | X | 0 | X |
| BIT2  | X | 1 | X |
| BIT3  | X | 0 | X |
| BIT4  | X | 1 | X |
| BIT5  | X | 0 | X |
| BIT6  | X | 1 | X |
| BIT7  | X | 0 | X |
| BIT8  | X | 1 | X |
| BIT9  | X | 0 | X |
| BIT10 | X | 1 | X |
| BIT11 | X | 0 | X |
| BIT12 | X | 1 | X |

A3

A4

Fig. 10B

[Fig. 10A]

A1: Data Input

[Fig. 10B]

A2: Data Output

A3: Shift A Output

A4: Shift B Output

A5: Frame Position Signal

【図11】

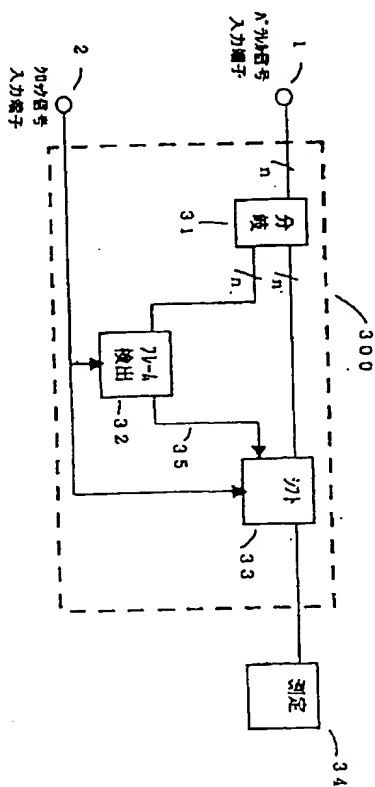


Fig. 11

【図12】

Fig. 12

シフト回路の真値表(データ入力が16ビットの時)

| 入力 |    |    |     |     |     |     | 出力  |       |       |     |       |
|----|----|----|-----|-----|-----|-----|-----|-------|-------|-----|-------|
| D0 | D1 | D2 | ... | D15 | SEL | CLK | Q0  | Q1    | Q2    | ... | Q15   |
| A  | B  | C  | ... | P   | 0   | ↑   | A   | B     | C     | ... | P     |
| A  | B  | C  | ... | P   | 1   | ↑   | B   | C     | D     | ... | A(+1) |
| A  | B  | C  | ... | P   | 2   | ↑   | C   | D     | E     | ... | B(+1) |
| A  | B  | C  | ... | P   | ... | ↑   | ... | ...   | ...   | ... | ...   |
| A  | B  | C  | ... | P   | 15  | ↑   | P   | A(+1) | B(+1) | ... | O(+1) |

[Fig. 11]

- 1: Parallel Signal Input Terminal  
 2: Clock Signal Input Terminal  
 31: Branch  
 32: Frame Detection  
 33: Shift  
 34: Measurement

[Fig. 12]

- A1: Truth Table of Shift Circuit (Where Data Input is 16 Bits)  
 A2: Input  
 A3: Output